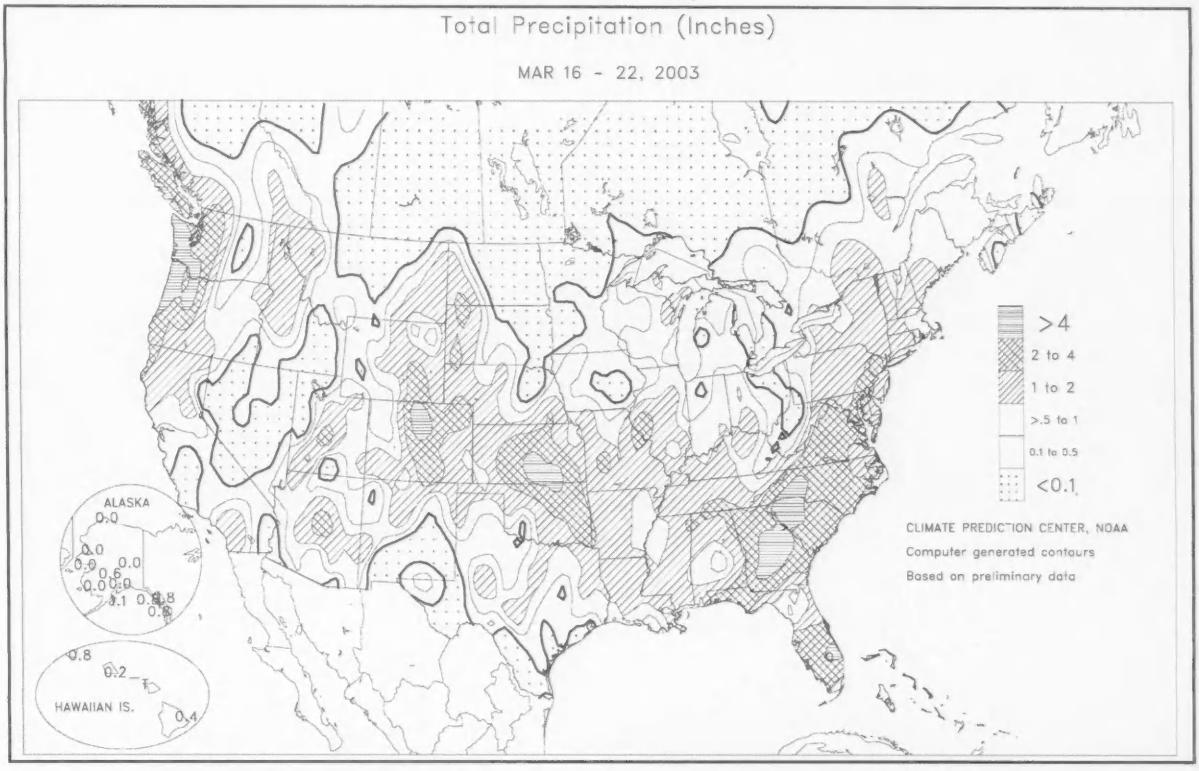
Volume 90, No. 12 http://www.usda.gov/oce/waob/jawf/wwcb.html March 25, 2003

WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service
and World Agricultural Outlook Board



HIGHLIGHTS

March 16 - 22, 2003

Highlights provided by USDA/WAOB

A major, spring storm system produced heavy precipitation across the **Northwest**, **central Rockies**, **central Plains**, and **Southeast**, including heavy snow in parts of the **West** and **central High Plains**. In addition, severe thunderstorms swept across portions of the **Plains**, **Midwest**, and **Southeast** from March 17-20. Widespread precipitation in the **West** boosted high-elevation snow packs, especially in the **central Rockies**, but failed to significantly improve water-supply prospects. Forecasts for mostly below-normal **Western** runoff (spring and summer streamflows) are due to the combination of mostly below-average reservoir levels, near- to below-

(Continued on page 5)

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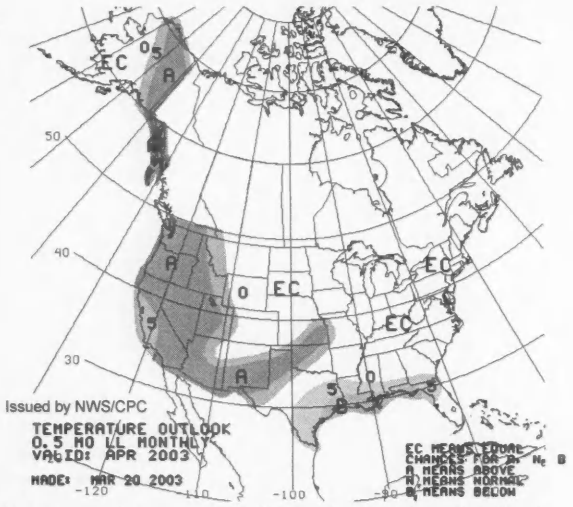
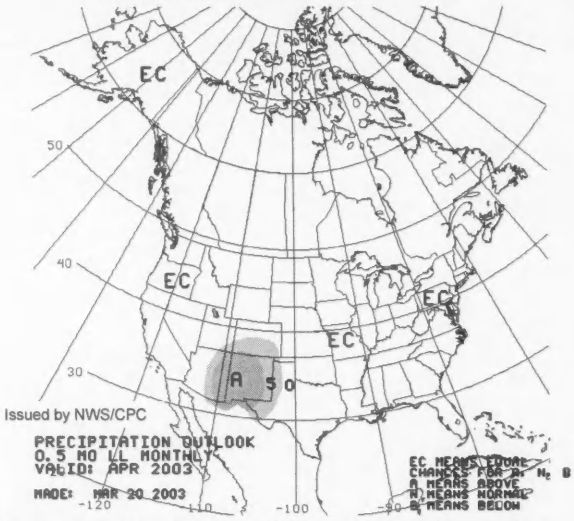
Monthly Temperature & Precipitation Outlook

Temperature Outlook: April 2003



Above-normal temperatures (A) are forecast from the Pacific Coast east into the Plateau Region. Meanwhile, below-normal (B) temperatures will be confined to the Gulf Coast. For the rest of the Nation, there is an equal chance (EC) for above- or below-normal temperatures.

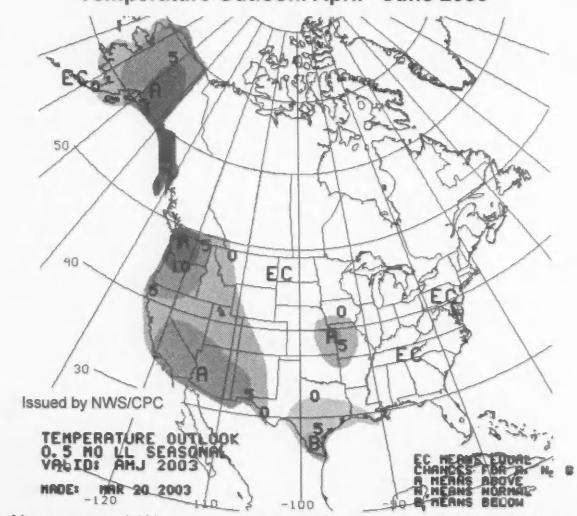
Precipitation Outlook: April 2003



Above-normal precipitation (A) is expected in the southern Rockies. Elsewhere, there is an equal chance (EC) for above- or below-normal precipitation.

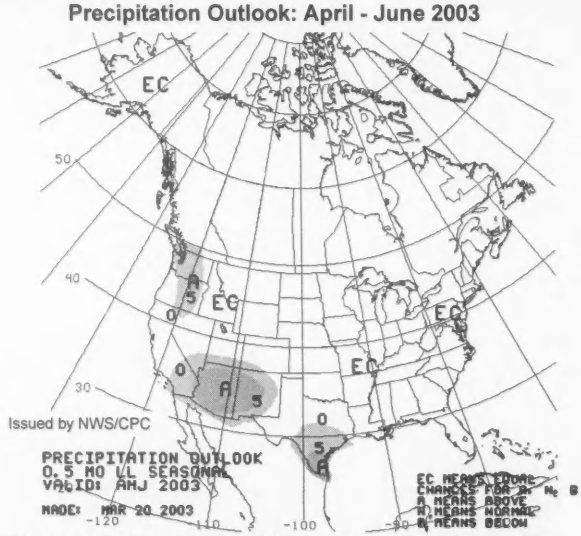
Seasonal Temperature & Precipitation Outlook

Temperature Outlook: April - June 2003



Above-normal (A) temperatures are forecast to persist in Alaska and from the Intermountain Region to the Pacific Coast. In addition, anomalous warmth is expected to develop in the central Plains. Cooler-than-normal temperatures (B) will be confined to the western Gulf Coast. For the rest of the Nation, there is an equal chance (EC) for above- or below-normal temperatures.

Precipitation Outlook: April - June 2003



Above-normal precipitation (A) is expected in portions of the Pacific Northwest, Southwest, and western Gulf Coast. Elsewhere, there is an equal chance (EC) for above- or below-normal precipitation.

Weather Data for Mississippi and the Missouri Bootheel

Weather Data for the Week Ending March 22, 2003

Data provided by the Mississippi State Delta Research and Extension Center (DREC), the Southern Regional Climate Center (SRCC), and the University of Missouri.

	STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							4-INCH SOIL TEMP, °F		NUMBER OF DAYS			
																	TEMP, °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
MS	BATESVILLE [X]	69	51	76	42	60	7	0.36	-1.02	0.33	2.09	50	11.92	90	-	-	0	0	2	0
	BELZONI [X]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	CLARKSDALE [X]	68	50	73	42	59	4	-	-	-	-	-	-	-	-	-	0	0	-	-
	CLEVELAND [X]	69	49	74	42	59	2	1.21	-0.19	1.21	1.78	41	11.03	81	-	-	0	0	1	1
	GREENVILLE [X]	69	52	76	44	61	4	-	-	-	-	-	-	-	-	-	-	-	-	-
	GREENWOOD [X]	70	54	77	50	62	5	0.36	-0.97	0.23	0.90	22	9.72	72	-	-	0	0	3	0
	INDIANOLA 1S	68	51	74	44	60	-	0.65	-	0.64	1.53	-	8.97	-	62	57	0	0	2	1
	INVERNESS 5E	69	52	76	47	61	-	0.31	-	0.26	1.37	-	10.02	-	60	58	0	0	3	0
	LYON	69	50	75	44	60	-	0.98	-	0.96	1.88	-	7.97	-	64	54	0	0	2	1
	MACON	68	53	81	44	61	-	1.17	-	0.89	2.69	-	13.04	-	64	58	0	0	4	1
	MOORHEAD [X]	70	53	76	47	61	4	0.32	-1.08	0.28	1.20	29	12.05	85	-	-	0	0	3	0
	ONWARD	69	51	74	43	60	-	1.12	-	0.78	1.92	-	10.73	-	62	57	0	0	2	1
	PERTHSHIRE	68	49	73	43	59	-	1.09	-	1.09	1.41	-	8.07	-	64	54	0	0	1	1
	ROLLING FORK [X]	71	50	77	42	61	4	0.87	-0.57	0.55	1.77	41	11.79	80	-	-	0	0	2	1
	SCOTT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	SIDON	69	54	77	50	62	-	0.39	-	0.28	0.97	-	8.74	-	69	58	0	0	3	0
	STARKVILLE	67	52	81	42	59	4	1.46	0.06	0.98	3.05	71	14.44	97	64	56	0	0	3	1
	TUNICA [X]	66	50	75	42	58	4	0.86	-0.43	0.84	2.36	61	-	-	-	-	0	0	2	1
	TUNICA 1W	68	49	73	41	59	-	-	-	-	-	-	-	-	60	54	0	0	-	-
	VANCE	67	50	74	42	59	-	0.90	-	0.87	2.06	-	8.06	-	57	54	0	0	2	1
	VERONA	66	51	79	42	59	-	1.41	-	0.87	2.25	-	10.57	-	62	54	0	0	3	2
	VICKSBURG [X]	71	51	77	43	61	2	1.50	0.03	1.24	2.31	51	13.49	87	-	-	0	0	3	1
	YAZOO CITY [X]	71	51	79	46	61	3	0.50	-1.11	0.40	0.97	20	9.97	62	-	-	0	0	2	0
	STONEVILLE [X]	69	51	74	44	60	4	1.07	-0.33	1.07	1.94	45	10.99	74	66	55	0	0	1	1
MO	DELTA	66	46	70	37	56	8	1.01	-0.02	0.65	1.24	39	4.87	46	61	50	0	0	3	1
	STEELE	66	49	72	42	57	7	0.86	0.01	0.59	1.05	31	8.41	77	59	52	0	0	4	1
	GLENNONVILLE	66	48	70	40	57	8	0.88	0.04	0.60	1.26	47	6.47	73	60	51	0	0	4	1
	PORTAGEVILLE LF	67	49	72	41	57	7	1.04	0.21	0.68	1.23	40	7.98	78	61	50	0	0	4	1
	CLARKTON	66	47	71	41	56	7	1.01	0.17	0.61	1.26	47	7.20	81	59	50	0	0	4	1
	CARDWELL	66	48	71	41	57	6	0.77	-0.12	0.70	1.15	35	7.84	74	60	52	0	0	3	1
	CHARLESTON	67	47	72	38	57	9	1.27	0.31	0.89	1.55	54	7.38	76	61	51	0	0	4	1
	PORTAGEVILLE DC	66	49	71	42	57	7	1.20	0.37	0.85	1.64	53	7.98	78	61	51	0	0	4	1

Compiled by USDA/OCE/WAOB's Stoneville Field Office. [X] Based on 1971-2000 normals. - Sufficient data not available.

Weather and Crop Summary: An early-week cold front provided additional rain, including a few thunderstorms with high winds and hail. Few if any reports of hail damage to crops were received. For the remainder of the week, very windy conditions increased evaporation rates, but sunshine was limited until week's end. Corn planting resumed at the end of the week, and soybean planting was underway.

Rockies and High Plains Snowfall Highlights

Official Snowfall (Inches), March 17-19

Location	Amount	Location	Amount
Denver, CO	31.8	Riverton, WY	7.1
Cheyenne, WY	18.3	Alamosa, CO	3.6
Casper, WY	13.3	Billings, MT	1.8
Lander, WY	12.0	Co. Springs, CO	1.7

Unofficial Snowfall (Inches), March 17-19

Location	County	Amount
Rollinsville, CO	Gilpin	87.5
Fritz Peak, CO	Gilpin	87.5
San Isabel Lake, CO	Custer	74.0
Coal Creek Canyon, CO	Jefferson	71.8
Allenspark, CO	Boulder	67.0
Georgetown, CO	Clear Creek	66.9

Denver's Five Greatest Storm-Total Snowfalls (Inches)

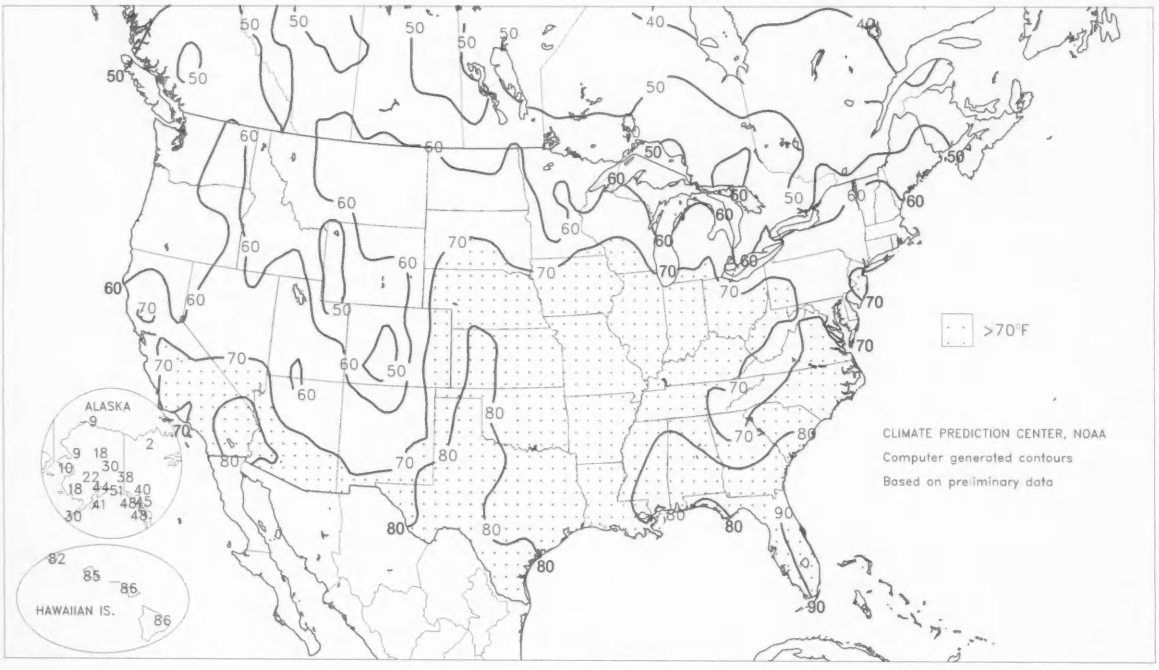
Rank	Total	Dates
1.	45.7	December 1-5, 1913
2.	31.8	March 17-19, 2003
3.	30.4	November 2-5, 1946
4.	23.8	December 24-25, 1982
5.	21.9	October 24-25, 1997

Denver's Five Snowiest Months (Inches) on Record

Rank	Total	Month/Year
1.	57.4	December 1913
2.	42.6	November 1946
3.	33.8	April 1933
4.	33.2	March 2003 (updated through March 22)
5.	32.5	March 1944

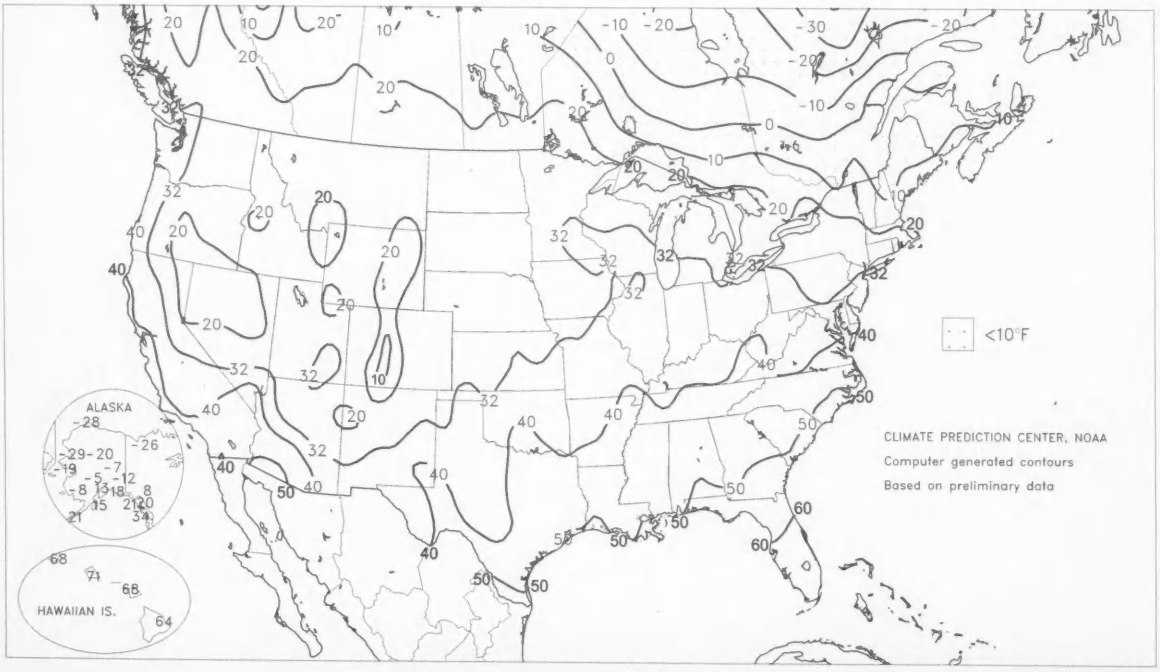
Extreme Maximum Temperature (°F)

MAR 16 - 22, 2003



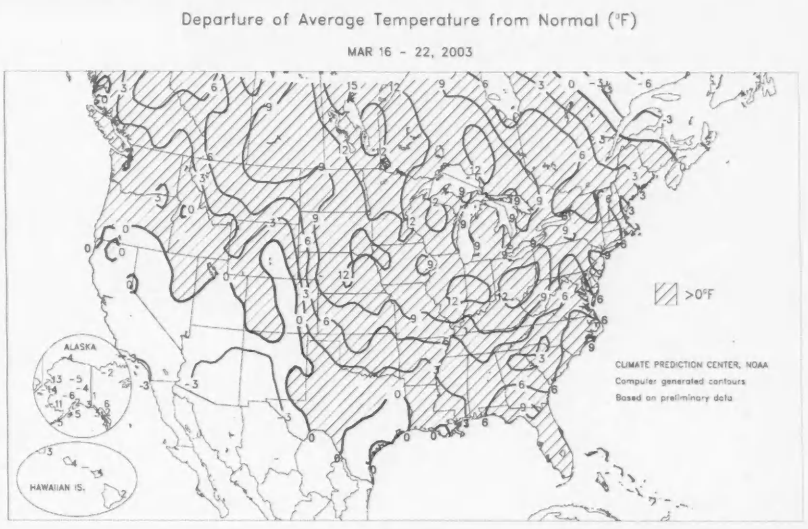
Extreme Minimum Temperature (°F)

MAR 16 - 22, 2003



(Continued from front cover)

normal snow packs, and abnormally dry soils. On the **Plains**, rain and snow improved soil moisture reserves for winter wheat from **Texas to southeastern Montana**, although local dry pockets persisted. Rainfall was heaviest (in excess of 4 inches) in portions of **south-central Kansas**, while more than 2 feet of snow blanketed parts of the **Colorado High Plains**. In contrast, weekly temperatures averaged generally 8 to 14°F above normal in the **Midwest**, where mostly light showers provided little or no relief from very dry conditions. Rainfall topped 1 inch in parts of the **southern Corn Belt**, boosting topsoil moisture in preparation for spring planting. Meanwhile in the **South**, frequently heavy showers slowed spring fieldwork, including initial corn, cotton, and rice planting. At least 4 inches of rain soaked areas from **central Georgia to western North Carolina**. Southern temperatures ranged from near normal in the **western Gulf Coast region** to as much as 10°F above normal in **Florida**, where record warmth continued.



Early in the week, warmth prevailed across the **Plains**, **Midwest**, and **East** in advance of a strong, spring storm, producing at least three dozen daily-record highs. Records on March 16 included 78°F in **Lamoni, IA**, and 81°F in **Hill City, KS**, and **Lincoln, NE. Lamoni** also set a record high the following day with a high of 75°F. Although mild weather prevailed thereafter in advance of the storm system, record warmth was largely confined to **Florida**. **Miami, FL**, set or tied 14 daily-record maxima during the first 22 days of the month, including highs of 90°F on March 18 and 19, 89°F on March 20, 91°F on March 21, and 93°F on March 22. In addition, **Miami's** high of 93°F broke their monthly record of 92°F, previously set on March 25, 1907, and March 22, 1977.

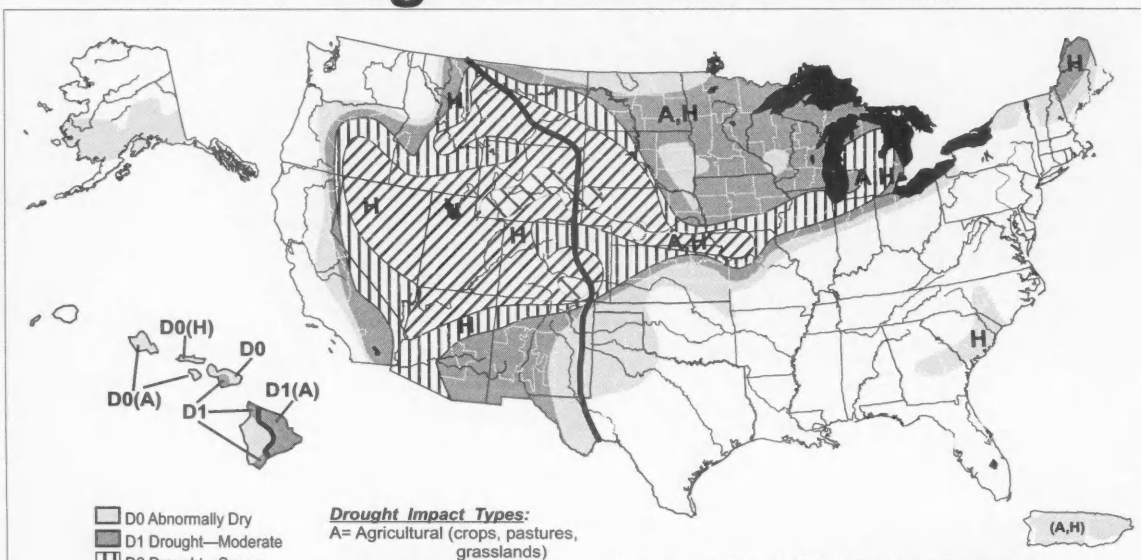
Meanwhile, a complex and sprawling storm system produced daily-record precipitation totals on March 16 in **Kalispell, MT** (0.48 inch), and **Las Vegas, NV** (0.20 inches). A day later, a 1.39-inch rainfall in **Williston, ND**, represented their wettest March day on record (previously, 1.01 inches on March 15, 1996). Meanwhile, a separate disturbance sparked heavy rain in **Florida**, where daily-record totals for March 17 included 2.03 inches in **Naples** and 1.88 inches in **Fort Myers**. Farther west, heavy snow developed in the **central Rockies** and adjacent **High Plains**. The March 17-19 storm ended **Denver's** streak of below-normal monthly precipitation totals at 19 (August 2001 - February 2003), dropping 2.80 inches of liquid equivalent in the form of 31.8 inches of snow. The March 17-19 snowfall marked **Denver's** second-greatest storm total on record, behind 45.7 inches from December 1-6, 1913. **Denver** also achieved their snowiest March (33.2 inches), eclipsing the 1944 record of 32.5 inches. In the nearby **Colorado Rockies**, unofficial storm-total snowfall reached 87.5 inches in the **Gilpin County** locations of **Rollinsville** and **Fritz Peak**. Farther east, March 17-20 rainfall reached 3.52 inches in **Wichita, KS**, including a daily-record total of 1.63 inches on Wednesday. Elsewhere in **Kansas**, March 17-20 rainfall totaled 3.76 inches in **Winfield** and 3.50 inches in **Hutchinson**.

Heavy rain swept into the **East** on March 20, producing daily-record totals in locations such as **Charleston, SC** (2.80 inches), **Richmond, VA** (2.55 inches), and **Wilmington, DE** (1.94 inches). Weekly rainfall totaled 5.59 inches in **Macon, GA**, including 4.23 inches on March 19-20. Severe thunderstorms associated with the storm system produced about three dozen tornadoes across nine **Southern and Lower Midwestern States** from March 17-20. A tornado caused a fatality in **Cookesville, TN**, on March 19, followed the next morning by a pair of F3 tornadoes (estimated winds from 158 to 206 mph) in **southern Georgia** that claimed a total of six lives. Meanwhile, heavy precipitation returned to the **Pacific Northwest** toward week's end, resulting in daily-record rainfall totals on March 21 in locations such as **Astoria, OR** (2.48 inches), and **Quillayute, WA** (2.25 inches).

Cold, mostly dry weather invaded **northern, western, and interior Alaska**, holding weekly temperatures 4 to 14°F below normal. Some snow fell along the interface between cold air to the north and mild weather farther south, resulting in consecutive daily-record snowfall totals (2.0 and 5.8 inches on March 18 and 19) in **McGrath**. However, season-to-date snowfall through March 23 remained near to below normal in most **Alaskan** observing locations, including **McGrath** (76.5 inches, or 86 percent of normal), **Juneau** (55.7 inches, or 62 percent), and **Anchorage** (31.9 inches, or 51 percent). Meanwhile in **Hawaii**, locally heavy showers diminished early in the week. Some of the week's heaviest rain fell in **Oahu's** windward locations on March 16-17, when 24-hour totals included 2.34 inches at the **Wilson Tunnel** and 1.17 inches at the **Manoa Lyon Arboretum**. Unusually warm weather, including a daily-record high (85°F on March 22) in **Honolulu, Oahu**, boosted weekly **Hawaiian** temperatures as much as 4°F above normal.

U.S. Drought Monitor

March 18, 2003
Valid 7 a.m. EST



D0 Abnormally Dry
D1 Drought—Moderate
D2 Drought—Severe
D3 Drought—Extreme
D4 Drought—Exceptional

Drought Impact Types:
A= Agricultural (crops, pastures, grasslands)
H= Hydrological (water)
Delineates dominant impacts
(No type = both impacts)

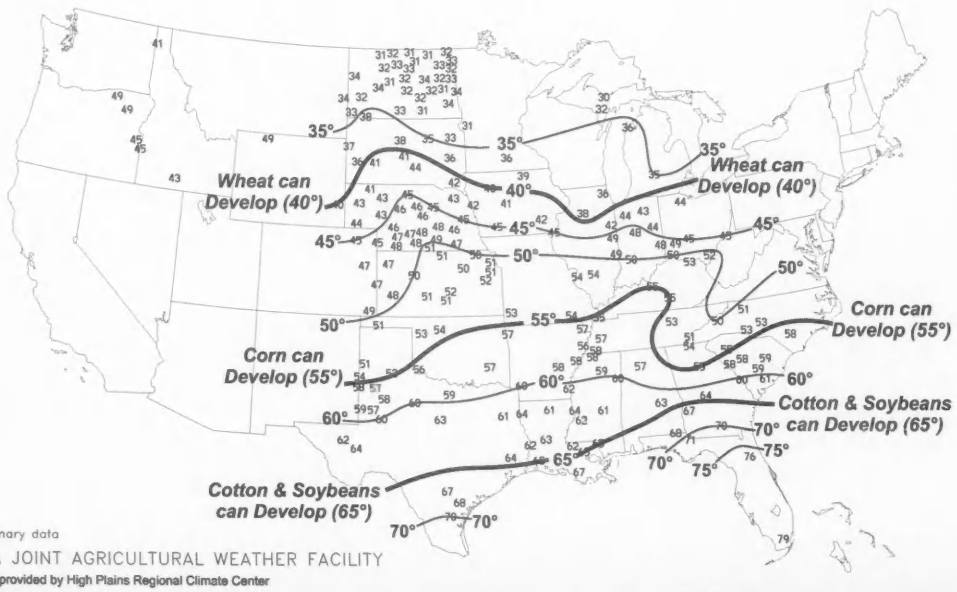
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

Released Thursday, March 20, 2003
Author: *Richard Heim/Candace Tankersley, NOAA/NESDIS/NCDC*

Average Soil Temperature (°F, 4" Bare)

MAR 16 - 22, 2003



Based on preliminary data

NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

Supplemental data provided by High Plains Regional Climate Center

National Weather Data for Selected Cities

Weather Data for the Week Ending March 22, 2003

Data Provided by Climate Prediction Center (301-763-8000, Ext. 7503)

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL, IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL	BIRMINGHAM	68	54	80	47	61	6	0.69	-0.74	0.54	4.09	95	12.11	87	95	53	0	0	3	1
	HUNTSVILLE	67	52	78	45	60	7	0.83	-0.71	0.43	1.50	31	10.80	71	93	70	0	0	3	0
	MOBILE	75	52	84	47	64	3	0.74	-0.94	0.67	2.94	57	9.08	57	91	57	0	0	2	1
	MONTGOMERY	72	55	85	47	64	5	0.10	-1.33	0.08	3.02	65	7.82	52	97	60	0	0	2	0
AK	ANCHORAGE	35	22	44	13	28	1	0.00	-0.12	0.00	0.11	24	1.25	67	83	69	0	7	0	0
	BARROW	-13	-22	-9	-28	-18	-5	0.00	0.00	0.00	0.01	100	0.21	88	79	76	0	7	0	0
	FAIRBANKS	22	-5	30	-7	9	-4	0.00	-0.06	0.00	0.01	6	1.07	98	81	61	0	7	0	0
	JUNEAU	42	29	45	20	36	2	0.82	0.08	0.33	3.02	117	10.17	89	97	85	0	5	5	0
	KODIAK	33	23	41	15	28	-5	1.09	-0.07	0.80	4.36	118	27.69	158	82	63	0	7	5	1
	NOME	6	-14	10	-19	-4	-14	0.00	-0.11	0.00	0.30	81	1.60	78	79	70	0	7	0	0
AZ	FLAGSTAFF	44	29	58	23	36	-1	0.82	0.26	0.70	1.14	58	4.10	61	89	52	0	6	3	1
	PHOENIX	71	51	80	45	61	-2	0.51	0.28	0.31	0.51	65	4.25	178	71	45	0	0	2	0
	TUCSON	67	46	77	42	56	-4	0.29	0.13	0.28	0.52	85	1.62	65	71	44	0	0	2	0
	YUMA	77	52	83	50	65	-2	0.23	0.18	0.21	0.24	141	1.36	164	55	31	0	0	2	0
AR	FORT SMITH	67	47	78	38	57	4	1.28	0.37	1.04	1.95	71	5.65	73	94	53	0	0	3	1
	LITTLE ROCK	67	48	74	41	57	3	1.10	-0.03	0.74	1.52	46	8.08	79	98	60	0	0	4	1
CA	BAKERSFIELD	68	44	75	40	56	-2	0.07	-0.24	0.05	0.36	35	2.04	60	85	59	0	0	2	0
	FRESNO	67	44	77	40	56	0	0.01	-0.47	0.01	0.64	39	2.29	39	87	62	0	0	1	0
	LOS ANGELES	66	52	70	47	59	1	0.00	-0.50	0.00	0.76	41	5.56	70	80	54	0	0	0	0
	REDDING	62	44	68	36	53	0	0.94	-0.20	0.28	3.03	79	12.06	76	86	63	0	0	4	0
	SACRAMENTO	64	44	70	38	54	-1	0.43	-0.17	0.18	1.69	79	4.37	46	94	49	0	0	4	0
	SAN DIEGO	65	54	70	51	59	-1	0.44	-0.07	0.39	1.38	84	6.27	105	81	65	0	0	2	0
	SAN FRANCISCO	61	50	62	47	55	1	0.19	-0.51	0.11	0.95	39	4.85	44	87	69	0	0	2	0
	STOCKTON	66	43	71	38	54	-1	0.19	-0.31	0.14	1.03	61	2.72	40	94	69	0	0	2	0
CO	ALAMOSA	46	27	52	20	36	2	0.37	0.27	0.17	0.37	137	0.62	85	91	61	0	6	4	0
	CO SPRINGS	48	31	63	28	39	1	0.29	0.05	0.11	0.40	63	0.99	78	87	48	0	5	4	0
	DENVER INTL	44	30	64	26	37	-2	2.83	2.63	1.57	2.89	459	3.42	314	88	66	0	5	4	1
	GRAND JUNCTION	53	34	61	28	44	0	0.19	-0.03	0.08	0.40	61	1.54	88	82	50	0	2	4	0
	PUEBLO	55	33	71	29	44	2	0.53	0.31	0.25	0.62	105	1.34	114	79	66	0	2	4	0
CT	BRIDGEPORT	55	35	63	28	45	5	0.97	0.01	0.58	2.67	94	8.24	87	91	76	0	3	3	1
	HARTFORD	58	33	68	25	45	6	1.04	0.15	0.62	2.05	77	7.60	80	83	60	0	3	2	1
DC	WASHINGTON	61	44	70	39	52	5	1.99	1.17	1.95	2.92	113	10.75	128	95	65	0	0	3	1
DE	WILMINGTON	62	42	70	36	52	8	2.13	1.22	1.95	3.74	134	10.14	112	98	45	0	0	5	1
FL	DAYTONA BEACH	82	65	90	60	74	9	1.07	0.19	0.50	7.22	270	12.91	151	98	59	1	0	3	1
	JACKSONVILLE	80	61	89	55	70	8	1.45	0.54	1.41	10.04	368	14.80	155	95	56	0	0	3	1
	KEY WEST	84	75	85	67	80	6	1.64	1.22	1.12	1.69	139	3.50	71	96	81	0	0	2	2
	MIAMI	89	74	93	67	82	9	2.16	1.59	1.98	2.56	157	3.82	68	93	61	4	0	3	1
	ORLANDO	84	66	91	62	75	7	1.64	0.81	0.87	3.72	151	6.08	84	96	70	1	0	3	2
	PENSACOLA	75	58	83	52	67	5	2.33	0.84	1.62	6.34	138	12.30	84	92	65	0	0	5	1
	TALLAHASSEE	79	60	85	52	70	8	0.30	-1.20	0.10	6.74	143	13.94	95	94	63	0	0	5	0
	TAMPA	81	69	84	64	75	7	2.24	1.62	1.38	2.64	128	5.67	81	91	72	0	0	3	2
	WEST PALM	88	71	92	66	79	8	2.95	2.07	1.24	4.52	186	6.45	74	98	68	1	0	6	3
GA	ATHENS	63	50	72	44	56	2	2.64	1.52	1.22	5.08	140	11.36	89	99	81	0	0	5	3
	ATLANTA	63	52	68	48	57	2	3.81	2.59	2.83	6.61	169	12.16	89	97	85	0	0	4	2
	AUGUSTA	68	52	80	46	60	3	3.38	2.34	2.18	6.84	207	12.59	106	96	81	0	0	5	2
	COLUMBUS	71	57	81	49	64	6	1.53	0.22	0.53	5.55	133	13.37	100	93	59	0	0	4	2
	MACON	71	54	75	48	62	5	5.60	4.51	2.30	7.93	223	14.54	111	97	53	0	0	6	3
	SAVANNAH	73	56	82	51	65	5	2.70	1.86	1.18	7.45	305	11.51	124	10	76	0	0	5	3
HI	HILO	82	65	86	64	74	2	0.45	-2.97	0.16	0.64	7	7.33	26	85	68	0	0	4	0
	HONOLULU	83	73	85	71	78	4	0.16	-0.23	0.13	1.11	79	3.43	53	78	69	0	0	2	0
	KAHULUI	84	70	86	68	77	4	0.02	-0.50	0.01	0.68	42	4.33	56	81	69	0	0	2	0
	LIHUE	81	71	82	68	76	3	0.75	-0.05	0.63	3.69	146	10.19	98	82	78	0	0	3	1
ID	BOISE	57	36	59	28	46	2	0.17	-0.13	0.16	0.62	66	3.10	89	75	51	0	2	2	0
	LEWISTON	57	38	63	31	48	3	0.18	-0.07	0.07	2.07	284	6.04	214	84	69	0	1	4	0
	POCATELLO	52	30	61	24	41	2	0.17	-0.13	0.13	0.46	48	1.88	61	82	49	0	5	2	0
IL	CHICAGO/O'HARE	56	39	73	36	48	10	0.36	-0.25	0.17	1.04	63	1.59	32	94	72	0	0	3	0
	MOLINE	60	39	75	35	49	9	0.32	-0.36	0.23	0.61	33	1.52	31	91	69	0	0	2	0
	PEORIA	63	41	72	36	52	11	0.97	0.32	0.51	1.10	59	2.71	54	95	58	0	0	2	1
	ROCKFORD	57	38	74	31	48	11	0.25	-0.31	0.23	0.94	64	1.39	33	94	76	0	1	2	0
	SPRINGFIELD	66	43	75	35	55	12	0.87	0.15	0.54	1.34	63	3.23	58	93	62	0	0	3	1
IN	EVANSVILLE	67	45	73	35	56	9	1.14	0.16	0.85	1.69	57	7.75	86	96	60	0	0	4	1
	FORT WAYNE	59	36	71	33	48	9	0.42	-0.23	0.27	0.91	49	3.59	61	98	67	0	0	3	0
	INDIANAPOLIS	67	45	74	37	56	13	0.55	-0.23	0.19	1.45	61	6.17	85	94	56	0	0	4	0
	SOUTH BEND	59	40	72	32	49	10	0.47	-0.20	0.36	1.01	54	3.14	51	97	69	0	1	2	0
IA	BURLINGTON	61	40	73	33	50	9	0.28	-0.41	0.24	0.45	23	1.67	35	92	56	0	0	2	0
	CEDAR RAPIDS	58	37	75	30	47	9	0.07	-0.45	0.07	0.18	13	0.84	24	98	61	0	2	1	0
	DES MOINES	59	39	76	30	49	9	0.31	-0.21	0.30	0.53	39	2.70	76	89	65	0	3	2	0
	DUBUQUE	54	37	73	33	45	9	0.30	-0.30	0.30	0.37	23	0.88	20	95	77	0	0	1	0
	SIOUX CITY	61	35	73	24	48	10	0.42	-0.06	0.24	0.45	36	1.63	66	89	60	0	2	3	0
	WATERLOO	58	37	78	32	47	11	0.36	-0.14	0.32	0.44	34	0.98	31	91	69	0	1	3	0
KS	CONCORDIA	64	44	78	31	54	11	1.87	1.32	0.85	1.87	118	3.09	104	92	68	0	1	4	2
	DODGE CITY	61	41	80	31	51	6	2.29	1.86	1.34	2.31	196	3.69	150	95	56	0	1	3	1
	GOODLAND	59	35	77	30	47	7	1.17	0.89	0.85	1.18	144	2.05	121	86	66	0	1	2	1
	TOPEKA	65	44	79	33	54	9	0.60	0.01	0.46	0.81	48	2.70	71	91	67	0	0	4	0

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending March 22, 2003

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																	TEMP. °F		PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	WICHITA	63	45	77	33	54	7	3.52	2.89	1.63	3.53	192	5.58	151	99	73	0	0	4	3
KY	JACKSON	70	52	75	41	61	13	0.29	-0.68	0.24	0.63	20	10.63	102	86	47	0	0	3	0
	LEXINGTON	66	48	73	38	57	10	0.40	-0.60	0.30	0.83	26	6.62	68	92	60	0	0	4	0
	LOUISVILLE	69	50	75	39	59	11	0.97	-0.03	0.48	1.39	44	6.67	69	94	57	0	0	4	0
	PADUCAH	67	46	73	35	57	8	1.36	0.42	0.94	1.60	54	8.64	83	99	49	0	0	4	1
LA	BATON ROUGE	73	51	80	44	62	1	0.35	-0.78	0.35	1.92	55	9.71	66	98	54	0	0	1	0
	LAKE CHARLES	73	53	76	48	63	1	0.81	-0.01	0.75	3.37	138	9.94	88	99	63	0	0	4	1
	NEW ORLEANS	73	55	78	50	64	1	0.43	-0.74	0.38	2.24	62	7.00	47	95	63	0	0	3	0
	SHREVEPORT	69	49	77	46	59	0	1.22	0.31	1.22	1.77	60	9.88	84	91	52	0	0	1	1
ME	CARIBOU	36	16	46	1	26	0	0.51	-0.07	0.34	1.45	83	5.54	82	88	54	0	7	4	0
	PORTLAND	43	28	55	16	35	0	1.08	0.13	0.80	2.36	84	6.85	68	94	61	0	5	2	1
MD	BALTIMORE	60	42	67	32	51	6	1.95	1.06	1.83	3.00	106	12.29	132	97	71	0	1	4	1
MA	BOSTON	48	33	63	27	41	1	0.41	-0.46	0.34	1.71	65	7.62	77	96	74	0	3	2	0
	WORCESTER	55	32	64	22	43	8	0.01	-0.97	0.01	1.68	58	6.46	64	98	50	0	4	1	0
MI	ALPENA	47	28	69	24	37	8	1.28	0.79	0.78	1.29	91	1.80	40	94	62	0	7	3	1
	GRAND RAPIDS	54	35	68	33	45	9	0.43	-0.18	0.24	0.94	58	2.48	48	98	67	0	0	3	0
	HOUGHTON LAKE	53	31	64	25	42	12	0.26	-0.22	0.10	0.41	31	0.77	18	95	71	0	5	3	0
	LANSING	56	34	70	31	45	10	0.05	-0.49	0.05	0.62	43	1.18	26	95	70	0	2	1	0
	MUSKEGON	53	36	66	32	45	10	0.33	-0.22	0.17	0.67	44	1.18	22	94	76	0	1	3	0
	TRAVERSE CITY	52	34	63	27	43	11	0.54	0.08	0.27	0.77	64	1.48	25	95	62	0	2	3	0
MN	DULUTH	41	30	60	27	36	10	0.20	-0.21	0.13	0.20	19	0.63	21	90	76	0	7	2	0
	INT'L FALLS	47	30	57	26	39	14	0.04	-0.18	0.03	0.13	23	0.33	16	91	57	0	5	2	0
	MINNEAPOLIS	51	37	64	33	44	11	0.36	-0.09	0.18	0.85	74	1.64	55	92	76	0	0	3	0
	ROCHESTER	51	36	68	32	43	11	0.43	-0.02	0.32	0.45	41	1.43	51	97	81	0	1	5	0
	ST. CLOUD	49	33	57	30	41	11	0.22	-0.14	0.20	0.36	42	0.83	38	92	62	0	1	3	0
MS	JACKSON	71	50	81	41	61	3	0.80	-0.52	0.66	3.72	95	14.15	101	95	52	0	0	3	1
	MERIDIAN	70	51	81	40	60	2	1.08	-0.51	0.55	3.58	73	11.97	74	97	60	0	0	4	1
	TUPELO	66	51	80	42	59	5	1.27	-0.16	0.72	1.87	41	11.18	78	94	68	0	0	4	2
MO	COLUMBIA	64	45	73	35	54	9	0.89	0.17	0.87	1.96	92	4.24	70	91	55	0	0	2	1
	KANSAS CITY	65	43	78	34	54	9	0.76	0.21	0.41	1.18	72	2.40	58	92	60	0	0	2	0
	SAINT LOUIS	66	47	72	41	57	10	1.24	0.41	0.99	2.47	100	5.42	79	90	66	0	0	4	1
	SPRINGFIELD	64	44	72	33	54	7	1.20	0.31	1.00	1.77	70	5.83	84	91	64	0	0	3	1
MT	BILLINGS	54	36	67	31	45	7	0.31	0.05	0.31	0.59	86	1.81	87	79	44	0	2	1	0
	BUTTE	46	25	54	20	36	5	0.08	-0.11	0.08	0.28	52	1.87	121	87	34	0	7	1	0
	GLASGOW	55	31	66	24	43	11	0.01	-0.09	0.00	0.09	32	0.48	54	86	54	0	3	1	0
	GREAT FALLS	55	31	65	26	43	9	0.00	-0.22	0.00	0.15	24	0.90	49	74	28	0	5	0	0
	HAVRE	56	28	69	23	42	9	0.00	-0.17	0.00	0.18	40	0.55	43	86	54	0	7	0	0
	KALISPELL	50	30	52	23	40	4	0.52	0.30	0.48	0.91	120	1.98	59	87	65	0	5	2	0
	MISSOULA	53	30	56	23	42	4	0.25	0.05	0.21	1.00	159	3.64	148	86	59	0	4	3	0
NE	GRAND ISLAND	62	38	79	27	50	11	0.41	-0.07	0.12	0.41	31	2.06	81	91	71	0	3	4	0
	LINCOLN	64	39	81	28	51	11	0.79	0.26	0.40	0.85	60	2.88	105	88	59	0	3	4	0
	NORFOLK	62	36	76	27	49	11	0.05	-0.41	0.04	0.11	9	1.21	47	89	62	0	2	2	0
	NORTH PLATTE	61	35	78	23	48	9	1.14	0.86	0.76	1.14	146	1.97	117	98	55	0	4	3	1
	OMAHA	61	39	76	29	50	9	0.31	-0.20	0.26	0.43	31	2.08	71	90	66	0	3	4	0
	SCOTTSBLUFF	54	33	70	29	43	5	0.82	0.56	0.61	0.89	124	1.27	69	88	64	0	5	3	1
	VALENTINE	59	32	74	23	46	10	0.54	0.29	0.26	0.67	97	1.19	81	96	61	0	4	3	0
NV	ELY	50	24	63	16	37	0	0.01	-0.21	0.01	0.33	46	1.04	47	79	45	0	7	1	0
	LAS VEGAS	67	49	78	45	58	-1	0.22	0.11	0.20	0.33	75	2.46	143	49	35	0	0	2	0
	RENO	57	32	65	25	44	0	0.02	-0.15	0.01	0.23	36	0.62	22	68	44	0	3	2	0
	WINNEMUCCA	56	26	66	12	41	-1	0.01	-0.18	0.01	0.11	20	2.00	100	73	43	0	4	1	0
NH	CONCORD	51	23	64	13	37	3	0.91	0.22	0.48	1.87	91	7.78	105	98	44	0	5	2	0
NJ	NEWARK	62	42	71	35	52	9	1.67	0.69	1.03	3.36	115	10.23	104	90	56	0	0	2	2
NM	ALBUQUERQUE	53	37	59	32	45	-4	1.44	1.30	0.50	1.44	351	2.46	184	90	49	0	1	6	1
NY	ALBANY	53	31	65	25	42	6	0.57	-0.14	0.56	0.93	45	6.56	97	90	47	0	5	2	1
	BINGHAMTON	52	34	63	27	43	9	0.88	0.21	0.79	1.46	74	6.18	88	89	66	0	2	4	1
	BUFFALO	53	35	65	30	44	9	0.92	0.24	0.64	2.05	101	7.01	92	94	57	0	3	4	1
	ROCHESTER	55	34	67	26	44	9	0.77	0.18	0.67	1.35	78	5.37	88	89	63	0	3	3	1
	SYRACUSE	55	33	66	27	44	9	1.11	0.41	0.84	1.82	91	5.88	88	88	56	0	3	3	1
NC	ASHEVILLE	60	48	69	45	54	7	2.24	1.20	0.98	3.75	115	9.42	84	95	77	0	0	5	2
	CHARLOTTE	62	48	72	43	55	1	3.13	2.13	1.61	5.85	185	11.44	107	99	75	0	0	6	2
	GREENSBORO	62	48	72	41	55	5	3.65	2.78	2.35	5.62	207	12.90	138	96	73	0	0	4	3
	HATTERAS	64	53	73	49	59	6	4.15	3.00	2.32	5.34	152	10.89	82	99	80	0	0	6	2
	RALEIGH	64	48	73	44	56	4	2.33	1.42	1.57	4.12	140	10.66	102	98	80	0	0	6	2
	WILMINGTON	72	56	79	51	64	8	3.02	2.07	2.48	5.00	163	10.20	91	10	70	0	0	4	1
ND	BISMARCK	50	29	66	24	39	8	0.00	-0.19	0.00	0.11	22	0.62	42	92	65	0	5	0	0
	DICKINSON	48	29	61	23	38	7	1.94	1.79	1.69	2.03	655	2.18	196	93	58	0	6	3	1
	FARGO	50	30	64	23	40	11	0.00	-0.27	0.00	0.12	16	0.59	28	96	68	0	4	0	0
	GRAND FORKS	46	28	62	24	37	10	0.06	-0.13	0.05	0.10	18	0.38	21	97	67	0	6	2	0
	JAMESTOWN	46	29	62	25	38	9	0.00	-0.20	0.00	0.13	24	0.28	17	97	70	0	5	0	0
	WILLISTON	49	27	62	21	38	8	1.38	1.21	1.37	1.69	376	2.63	191	95	73	0	6	2	1
OH	AKRON-CANTON	61	42	69	33	51	12	0.11	-0.61	0.08	1.68	78	5.38	78	93	63	0	0	3	0
	CINCINNATI	67	46	73	35	56	11	0.82	-0.07	0.50	1.56	58	6.80	82	92	63	0	0	3	1
	CLEVELAND	61	39	71	36	50	11	0.36	-0.31	0.28	1.40	71	6.15	91	88	60	0	0	2	0
	COLUMBUS	67	46	74	38	57	14	0.38	-0.28	0.25	1.17	60	5.78	86	86	53	0	0	3	0
	DAYTON	65	45	71	39	55	14	0.76	0.00	0.36	1.65	76	4.96	70	89	55	0	0	3	0
	MANSFIELD	62	39	70	33	51	13	0.21	-0.57	0.13	1.59	76	4.37	63	97	62	0	0	2	0

Based on 1971-2000 normals

*** Not Available

Weather Data for the Week Ending March 22, 2003

STATES AND STATIONS		TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY PERCENT		NUMBER OF DAYS TEMP. °F		NUMBER OF DAYS PRECIP	
		AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL IN., SINCE Mar 1	PCT. NORMAL SINCE Mar 1	TOTAL IN., SINCE Jan 1	PCT. NORMAL SINCE Jan 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
	TOLEDO	58	35	72	29	46	8	0.57	-0.03	0.30	1.13	67	4.32	79	96	78	0	2	3	0
	YOUNGSTOWN	60	40	71	36	50	12	0.49	-0.21	0.38	1.45	71	5.39	84	87	62	0	0	3	0
OK	OKLAHOMA CITY	63	47	78	39	55	3	0.56	-0.10	0.33	0.56	27	1.43	29	91	59	0	0	3	0
	TULSA	65	47	76	36	56	4	2.57	1.74	1.84	2.57	104	4.50	75	94	68	0	0	3	2
OR	ASTORIA	52	42	53	37	47	1	5.66	4.03	2.58	12.16	227	29.68	130	94	82	0	0	7	5
	BURNS	49	28	55	21	39	1	0.37	0.11	0.18	0.98	110	2.32	73	90	66	0	6	6	0
	EUGENE	55	41	60	36	48	1	1.74	0.46	0.65	4.72	111	14.35	79	95	77	0	0	6	2
	MEDFORD	55	38	59	32	47	0	0.27	-0.12	0.10	1.34	100	5.55	94	96	59	0	1	6	0
	PENDLETON	59	38	70	34	49	3	0.46	0.18	0.33	1.46	168	5.44	154	84	63	0	0	4	0
	PORTLAND	55	42	57	37	49	2	1.45	0.65	0.46	4.90	181	15.25	128	92	76	0	0	7	0
	SALEM	55	41	60	33	48	1	1.45	0.56	0.58	4.23	137	14.46	103	90	77	0	0	6	2
PA	ALLENTOWN	60	38	69	28	49	9	1.45	0.63	1.34	2.68	108	7.21	83	92	65	0	2	2	1
	ERIE	56	37	68	30	46	9	0.55	-0.16	0.30	0.95	46	5.11	74	94	76	0	1	4	0
	MIDDLETOWN	57	37	67	30	47	5	1.77	1.05	1.74	2.97	129	9.42	117	97	62	0	1	3	1
	PHILADELPHIA	63	43	70	37	53	9	1.50	0.62	1.39	3.37	127	10.34	116	98	83	0	0	4	1
	PITTSBURGH	62	42	72	34	52	11	0.22	-0.50	0.11	1.07	49	6.11	84	93	61	0	0	3	0
	WILKES-BARRE	58	36	67	31	47	8	0.41	-0.21	0.35	0.93	52	3.96	63	92	53	0	3	2	0
	WILLIAMSPORT	56	33	66	28	45	6	1.27	0.54	1.19	1.95	90	6.24	82	94	76	0	3	3	1
RI	PROVIDENCE	57	35	68	27	46	6	1.01	-0.01	0.75	2.99	99	8.78	81	93	68	0	3	2	1
SC	BEAUFORT	71	57	82	50	64	6	0.69	-0.16	0.39	3.53	142	6.92	72	10	66	0	0	4	0
	CHARLESTON	73	56	80	51	65	7	3.32	2.38	2.80	6.96	249	10.46	105	96	68	0	0	4	1
	COLUMBIA	67	52	79	46	60	4	2.45	1.40	1.57	7.08	218	12.04	102	98	81	0	0	5	2
	GREENVILLE	61	50	71	45	56	4	4.05	2.85	1.84	6.07	156	12.01	96	98	79	0	0	5	2
SD	ABERDEEN	54	31	65	22	43	11	0.35	0.04	0.32	0.37	46	0.67	38	93	63	0	4	2	0
	HURON	59	31	71	22	45	11	0.13	-0.26	0.12	0.13	13	1.39	67	93	52	0	4	2	0
	RAPID CITY	53	32	71	25	42	6	1.05	0.82	0.50	1.05	169	1.60	110	89	54	0	5	4	1
	SIOUX FALLS	59	33	69	22	46	12	0.03	-0.41	0.03	0.30	28	1.24	59	92	62	0	3	1	0
TN	BRISTOL	66	46	68	41	56	8	0.70	-0.17	0.23	2.05	73	10.85	111	95	54	0	0	5	0
	CHATTANOOGA	64	50	69	44	57	5	1.94	0.52	1.60	3.08	69	13.47	92	96	73	0	0	3	1
	KNOXVILLE	67	51	72	45	59	9	0.38	-0.80	0.28	1.31	35	13.20	107	97	62	0	0	4	0
	MEMPHIS	69	51	75	42	60	6	0.96	-0.30	0.67	1.35	35	10.48	85	93	54	0	0	3	1
	NASHVILLE	68	50	77	44	59	8	0.89	-0.22	0.69	1.08	31	11.12	100	98	53	0	0	4	1
TX	ABILENE	68	48	80	34	58	1	0.45	0.15	0.31	0.48	51	1.62	53	83	55	0	0	4	0
	AMARILLO	61	38	80	32	49	0	0.20	-0.06	0.17	0.20	28	0.44	23	83	50	0	1	2	0
	AUSTIN	70	47	78	36	59	-3	0.13	-0.32	0.07	0.58	37	6.13	113	81	51	0	0	2	0
	BEAUMONT	73	54	78	49	64	1	0.57	-0.30	0.51	1.55	60	8.98	77	98	52	0	0	3	1
	BROWNSVILLE	82	57	88	51	69	0	0.14	-0.05	0.12	0.44	85	1.70	56	97	63	0	0	3	0
	CORPUS CHRISTI	77	55	85	48	66	-1	0.15	-0.21	0.15	0.80	66	3.16	68	92	64	0	0	1	0
	DEL RIO	77	54	86	43	65	0	0.50	0.31	0.50	0.69	111	1.47	68	71	46	0	0	1	1
	EL PASO	63	44	75	37	54	-4	0.14	0.11	0.09	0.18	113	1.56	156	77	34	0	0	2	0
	FORT WORTH	68	51	78	44	59	1	0.85	0.19	0.73	0.85	38	4.16	64	86	54	0	0	3	1
	GALVESTON	74	59	79	54	66	1	0.05	-0.58	0.03	0.16	8	3.03	35	91	47	0	0	2	0
	HOUSTON	73	54	78	47	63	0	0.80	0.05	0.71	1.79	78	7.97	89	92	60	0	0	3	1
	LUBBOCK	65	43	82	35	54	2	0.09	-0.06	0.08	0.09	20	0.21	13	82	46	0	0	2	0
	MIDLAND	69	47	82	40	58	1	0.17	0.10	0.08	0.18	60	1.16	82	88	58	0	0	4	0
	SAN ANGELO	71	49	81	33	60	2	0.93	0.74	0.63	1.20	174	3.09	115	84	53	0	0	3	1
	SAN ANTONIO	73	51	78	41	62	-1	0.30	-0.11	0.21	0.75	57	3.90	83	90	46	0	0	2	0
	VICTORIA	76	53	83	46	64	0	0.10	-0.40	0.09	0.72	46	4.42	73	94	56	0	0	2	0
	WACO	69	51	78	43	60	1	0.41	-0.10	0.34	1.19	66	4.34	71	87	64	0	0	2	0
	WICHITA FALLS	67	46	82	38	57	2	0.19	-0.31	0.14	0.19	12	1.10	26	90	64	0	0	3	0
UT	SALT LAKE CITY	52	36	65	32	44	0	0.27	-0.17	0.26	1.04	80	2.73	68	80	45	0	1	2	0
VT	BURLINGTON	48	29	63	19	38	6	1.06	0.52	0.85	1.17	77	3.14	58	95	59	0	4	3	1
VA	LYNCHBURG	63	44	71	37	53	6	2.17	1.30	1.86	2.87	106	10.16	109	94	66	0	0	4	1
	NORFOLK	62	48	74	44	55	5	0.61	-0.32	0.35	2.26	78	9.82	97	94	77	0	0	2	0
	RICHMOND	63	45	70	39	54	5	2.65	1.72	2.55	4.03	138	10.41	110	10	85	0	0	3	1
	ROANOKE	63	47	72	40	55	7	1.72	0.85	1.13	2.11	78	9.35	104	85	69	0	0	3	1
	WASH/DULLES	60	41	71	34	50	6	1.90	1.10	1.81	2.51	101	10.18	123	96	66	0	0	4	1
WA	OLYMPIA	53	38	55	31	46	2	3.01	1.85	1.22	6.85	178	18.62	106	97	87	0	2	7	2
	QUILLAYUTE	50	40	51	36	45	1	6.86	4.46	2.21	13.07	161	30.27	89	96	90	0	0	7	6
	SEATTLE-TACOMA	52	41	54	36	46	0	1.99	1.17	0.80	6.02	223	15.78	131	94	81	0	0	6	2
	SPOKANE	51	33	57	28	42	2	0.63	0.30	0.28	1.68	154	5.58	126	92	57	0	3	4	0
	YAKIMA	59	31	62	25	45	2	0.04	-0.10	0.04	0.44	98	2.92	121	80	55	0	5	1	0
WV	BECKLEY	60	47	67	42	53	10	0.25	-0.56	0.25	0.68	26	7.53	86	90	67	0	0	1	0
	CHARLESTON	68	48	75	43	58	12	0.27	-0.60	0.27	1.09	39	10.38	112	92	50	0	0	1	0
	ELKINS	64	38	71	30	51	10	0.30	-0.58	0.30	1.19	43	7.78	83	93	48	0	1	1	0
	HUNTINGTON	70	48	74	41	59	12	0.21	-0.65	0.20	0.89	32	8.09	89	92	50	0	0	2	0
WI	EAU CLAIRE	54	36	69	31	45	13	0.32	-0.13	0.13	0.57	52	1.35	46	98	62	0	1	3	0
	GREEN BAY	47	34	65	31	40	8	1.20	0.71	0.51	1.26	98	2.40	69	98	78	0	1	5	1
	LA CROSSE	52	38	70	33	45	9	0.82	0.34	0.44	1.03	90	1.96	59	97	64	0	0	5	0
	MADISON	53	36	72	34	44	9	0.45	-0.08	0.25	0.65	47	1.52	39	96	73	0	0	3	0
	MILWAUKEE	52	36	68	34	44	8	0.48	-0.13	0.34	0.78	49	1.57	31	97	73	0	0	5	0
WY	CASPER	42	28	59	16	35	-1	0.53	0.34	0.28	0.55	92	1.18	65	89	72	0	6	3	0
	CHEYENNE	43	29	61	25	36	1	0.36	0.12	0.35	0.38	57	0.66	42	81	61	0	5	2	0
	LANDER	45	30	58	26	37	1	0.64	0.36	0.50	0.68	89	2.10	115	84	68	0	6	3	1
	SHERIDAN	47	28	64	22	38	2	0.97	0.74	0.67	1.14	193	2.32	120	87	68	0	6	4	1

Based on 1971-2000 normals *** Not Available

NOTE: These data are preliminary and subject to change. In the past, precipitation totals from a number of stations have been incomplete.

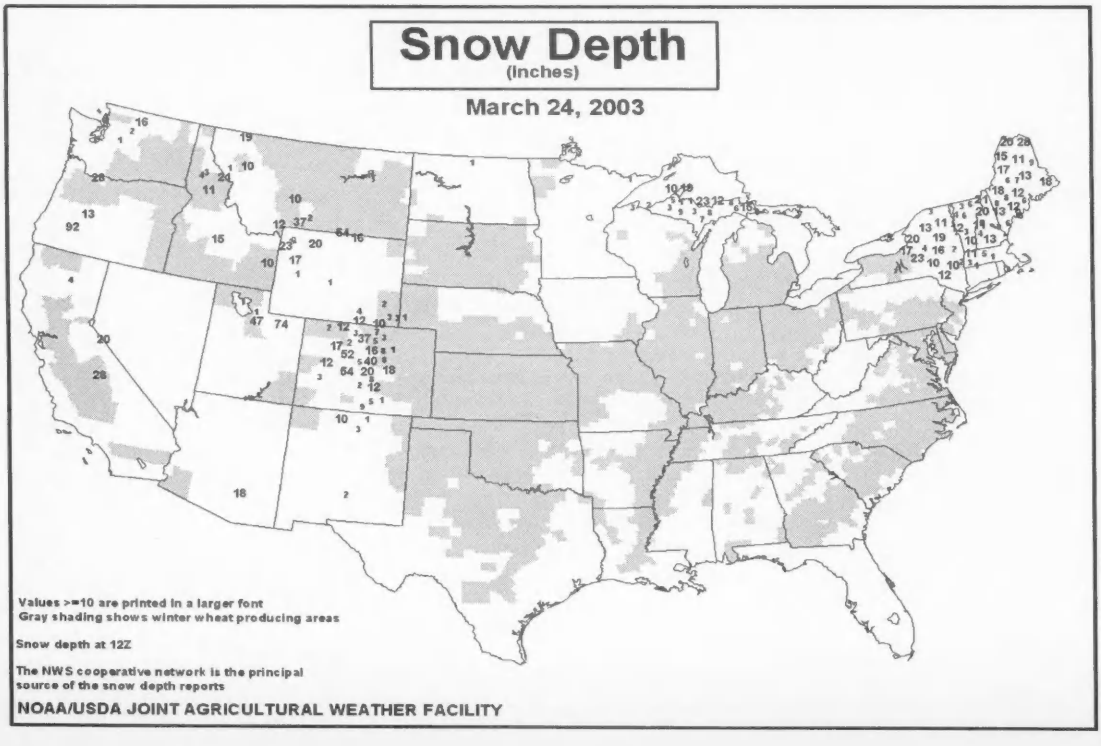
National Agricultural Summary

March 17 - 23, 2003

Weekly National Agricultural Summary provided by USDA/NASS

HIGHLIGHTS

A major storm brought needed moisture and some relief to the prolonged drought in the northern and central Rocky Mountains. Nearly all of Wyoming received above-normal precipitation. Temperatures were also above normal and quickly began melting snow. Forty-one percent of the State reported adequate to surplus topsoil moisture, 25 points higher than last month but still below the 5-year average. Subsoil moisture conditions continued below average. Range and pasture conditions remained mostly poor. In Colorado, the Front Range totaled 1 to 3 feet of snow, while the Eastern Plains received 1 to 2 inches of rain. The welcomed moisture improved the winter wheat condition but curtailed field activities. Pasture condition ratings were below that of this time last year but improved with the recent moisture. This same storm system produced much-needed rain across Kansas and Oklahoma, where soil moisture conditions improved to mostly adequate. Warm weather covered the Corn Belt, while rainfall was minimal in some areas and up to 2 inches in others. Recent California rains benefited crops, and good soil moisture contributed to strong growth in wheat, oats, barley, and winter forage. Developing fruit became visible in many stone fruit orchards, while bloom continued in late varieties. New green shoots became more widespread in raisin, wine, and table grape vineyards as vines responded to periods of warm, sunny weather. Many grape growers cultivated and irrigated their vineyards. Vegetable transplanting was slowed in some areas by cool, wet weather. Harvest of a wide range of vegetables remained active. The additional rainfall benefited pastureland. Foothill pastures were in mostly good condition, and in northern California, pasture conditions were good to excellent. Livestock were in good condition. Weather in Texas varied from cool, wet, and windy conditions early in the week to warm, dry conditions at week's end. Much-needed rain fell in the plains and across central and southern locations. The rains improved harvest prospects for small grains. Small grains suffered in areas where rain was nonexistent, and irrigation remained active. Some corn producers were concerned by delays in land preparation due to previous wet spells. Land preparation and fieldwork were active for cotton, peanuts, and soybeans. Peach trees began to bloom. Warm weather allowed pasture and range conditions to improve. Supplemental feeding of livestock declined. Temperatures throughout Florida's citrus belt climbed to the 90 degrees Fahrenheit mark for the first time in 2003. Surface soil moisture was adequate as a result of recent rains. The bloom cycle is about complete as most trees continued petal drop. Harvest of Valencia oranges and white and colored grapefruit increased. Vegetable harvest remained active, with strawberry harvest slowed by rains.


Snow Depth
(Inches)
March 24, 2003
Values >=10 are printed in a larger font
Gray shading shows winter wheat producing areas
Snow depth at 12Z
The NWS cooperative network is the principal source of the snow depth reports
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY

International Weather and Crop Summary

March 16 - 22, 2003

International Weather and Crop Highlights and Summaries provided by USDA/WAOB

HIGHLIGHTS

EUROPE: Across western Europe, dry weather continued to reduce topsoil moisture for early vegetative winter grains and oilseeds, but cool weather limited crop water use.

FSU-WESTERN: A strong cold front brought colder weather and light to moderate snow to Ukraine and the Southern Region in Russia, delaying early-spring fieldwork.

MIDDLE EAST: Across Turkey and the eastern Mediterranean, widespread rain maintained favorable moisture supplies for winter crops, but more rain was needed in western Iran as winter crops continued to break dormancy.

NORTHWESTERN AFRICA: Timely rain favored vegetative to reproductive winter grains across Morocco and Tunisia, but rain was needed to maintain adequate soil moisture in Algeria.

SOUTH AFRICA: Widespread, soaking rains were very timely, helping to maintain yield prospects for filling summer crops in the western and central corn belt.

EASTERN ASIA: Drier, although seasonably warm weather covered the North China Plain, while in the Yangtze Valley, locally heavy rain continued to build irrigation reserves for summer crop establishment.

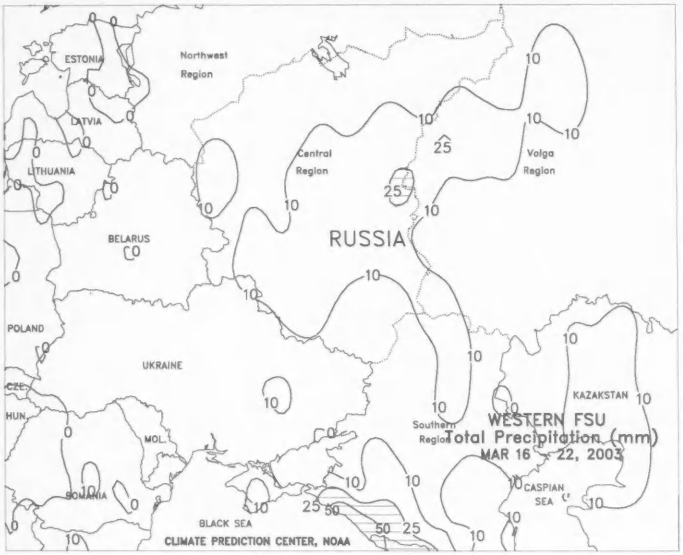
SOUTHEAST ASIA: The seasonal migration of showers northward resulted in lighter rainfall in Java, Indonesia.

AUSTRALIA: Showers provided some drought relief in Queensland and northern New South Wales, but were too late to improve yield prospects for drought-damaged cotton and sorghum.

SOUTH AMERICA: A drying trend aided summer crop harvesting in Argentina and parts of southern Brazil.

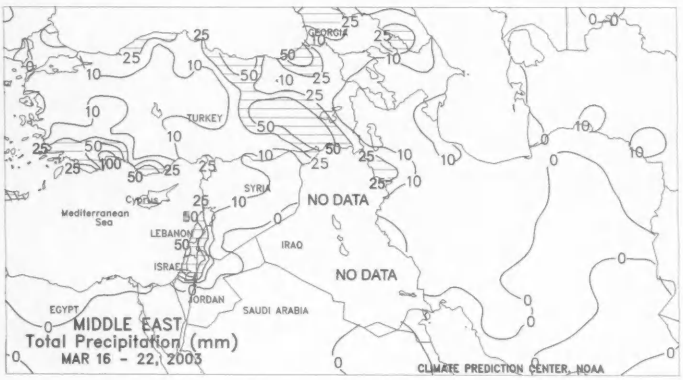
EUROPE

A stagnant, high-pressure system remained over southern England and northern France, producing dry weather and seasonable temperatures. Across England, France, the Low Countries, and western Germany, winter grains and oilseeds broke dormancy. Dry weather reduced topsoil moisture across these countries after winter crops began breaking dormancy 3 weeks ago, and seasonable temperatures kept evaporation rates relatively low. The dry weather favored early fieldwork preparation for summer crops, but rain will be needed in a few weeks to maintain favorable growing conditions for winter crops and summer crop planting. The driest region remains in the Po Valley of northern Italy, where subsoil moisture supplies remained adequate to abundant. Farther east in eastern Germany and eastern Europe, cool weather continued to slow winter crops from breaking dormancy. Across southern Europe, mostly dry, cool weather also prevailed, reducing crop-water and irrigation use. The southern Iberian Peninsula received light to moderate rain (5-20 mm), aiding winter crops. Temperatures averaged 1 to 3 degrees C below normal across eastern Europe, near normal across western Europe, and slightly below normal across the Iberian Peninsula. Minimum temperatures were below -5 degrees C across central and eastern Europe and below freezing across western Europe. Maximum temperatures reached 10 to 15 degrees C in central and eastern Europe and above 15 degrees C in the west.



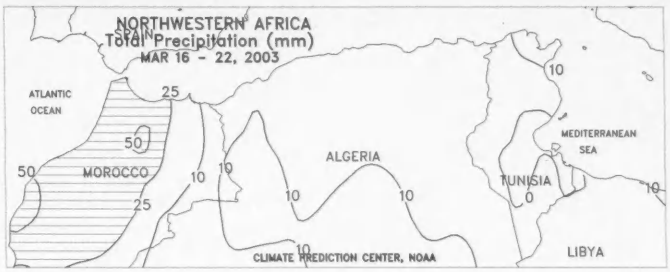
FSU-WESTERN

After a period of seasonably cool, dry weather, a strong cold front pushed southward across the region during the latter half of the week, ushering in a return of unseasonably cold weather along with light to moderate snow. Snow (3-10 mm of liquid equivalent) fell as far south as southern Ukraine and the Southern Region in Russia. The heaviest snow (more than 10 mm of liquid equivalent) fell across the Central Region in Russia. The cold, snowy weather maintained an unusually late snow cover in Ukraine and brought renewed snow cover to the Southern Region in Russia, delaying early-spring fieldwork. Behind the front, minimum temperatures ranged from -13 to -5 degrees C in southern Belarus, Moldova, Ukraine, and the Southern Region. Minimum temperatures ranged from -17 to -10 degrees C from northern Belarus eastward to the Central Region and into the Volga Region. By week's end, eastern portions of Belarus, southern Ukraine, and the southern portion of the Southern Region had a shallow snow cover. Snow depths continued to range from 10 to 50 cm in northeastern Ukraine and the Central and Volga Regions in Russia. Weekly temperatures averaged 1 to 5 degrees C below normal across the region, keeping winter grains dormant. Typically, winter grains begin breaking dormancy in crop areas adjacent to the Black Sea Coast in late March.



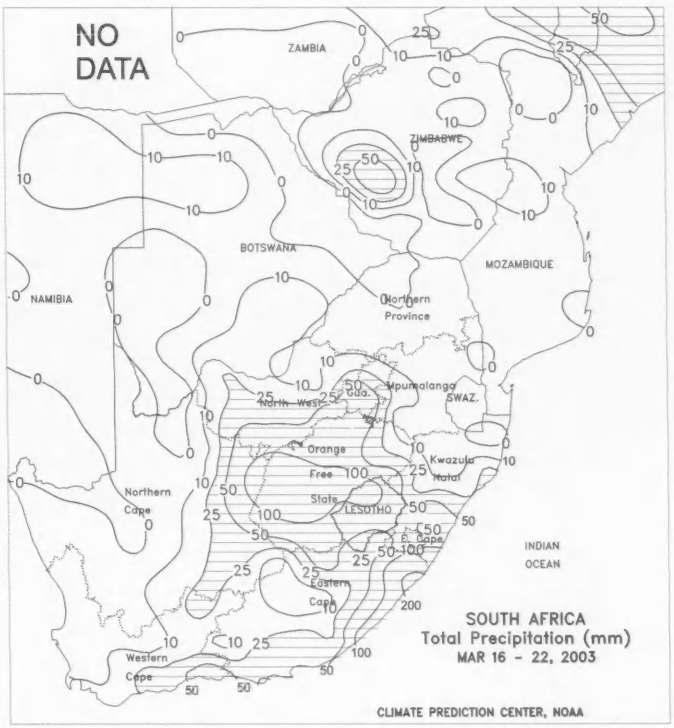
MIDDLE EAST

Widespread precipitation (5-40 mm of water equivalent) fell across the main wheat areas of Turkey, maintaining adequate moisture supplies for winter crops. The heaviest precipitation (25-60 mm) fell across eastern Turkey, including the Tigris and Euphrates watersheds of southeastern Turkey, and the southwestern coastal areas. In central Turkey, unseasonably cold weather (temperatures 3-5 degrees C below normal and minimum temperatures -7 to -4 degrees C) halted the greening of winter grains. In western Iran, light rain (3-15 mm) provided some moisture for rainfed winter crops, but more rain was needed as winter crops continued to break dormancy. Across the coastal eastern Mediterranean, a slow-moving storm system produced moderate to heavy rain (25-200 mm), maintaining adequate moisture supplies for vegetative to reproductive winter grains, but causing local flooding. Based on weather reports from neighboring countries, moderate rain possibly fell across northern Iraq. Temperatures averaged near normal across the eastern Mediterranean and 1 to 3 degrees C above normal across western Iran.



NORTHWESTERN AFRICA

In Morocco, widespread rain (10-50 mm) covered the crop areas, providing timely rain for reproductive winter grains. Likewise in Tunisia, light to moderate rain (5-20 mm) maintained adequate soil moisture for reproductive winter grains. Across Algeria, mostly dry weather (less than 5 mm) reduced soil moisture for reproductive winter grains, but cool weather (temperatures 2-4 degrees C below normal) helped to reduce crop water use. Soil moisture remained adequate in Algeria, but rain was needed to boost declining soil moisture levels. On March 17 and 18, freezing to near-freezing minimum temperatures stressed vegetative winter grains in the higher elevations of eastern Algeria and western Tunisia.

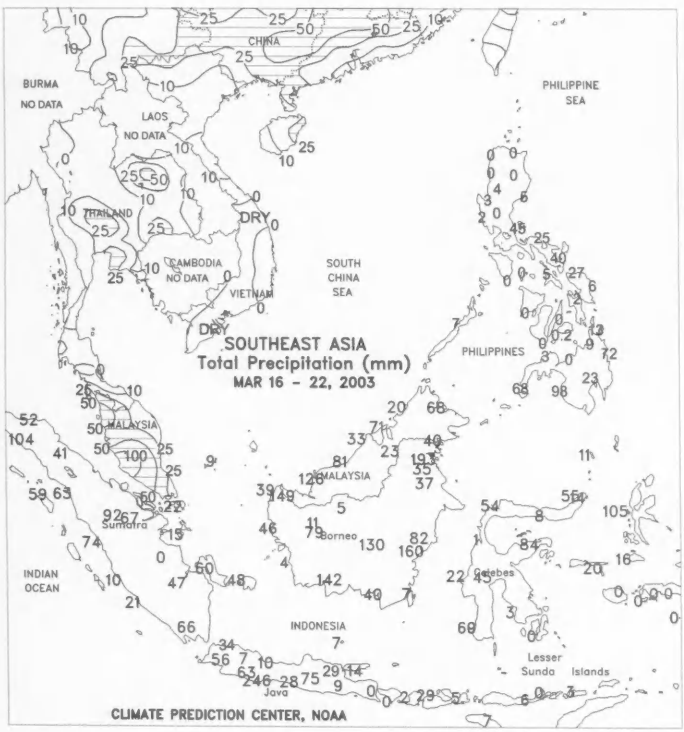


SOUTH AFRICA

Widespread, soaking rains (25-55 mm) overspread the western and central corn belt, providing beneficial moisture for filling summer crops. Following 2 weeks of relatively dry weather, the rainfall was very timely, improving crop conditions and yield prospects for corn and other summer crops. Farther east, lighter showers fell across eastern Free State (10-25 mm), southern Mpumalanga (less than 15 mm), and northern KwaZulu Natal (less than 10 mm). Although the rainfall was welcomed and helped stabilize conditions for drought-affected crops, improvements in yield potential were unlikely given the cumulative affects of dryness throughout the growing season and because crops were approaching maturation. Temperatures in the corn belt were generally seasonable, with maximum temperatures in the lower to middle 30s degrees C.

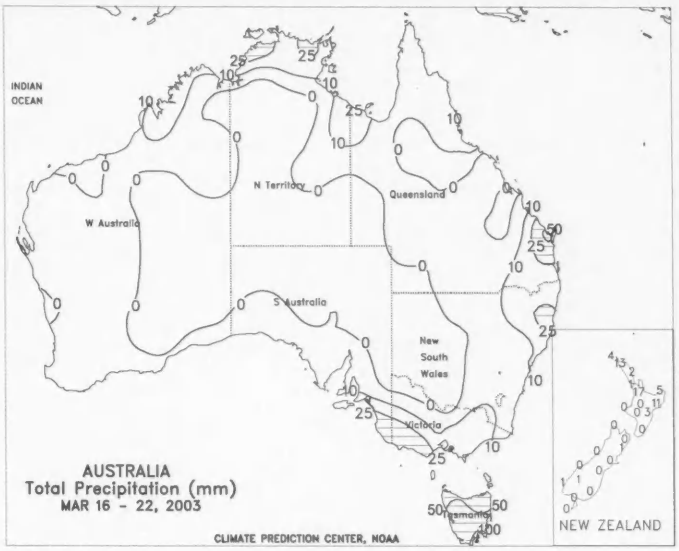
EASTERN ASIA

Mostly dry weather returned to the North China Plain. Seasonable temperatures aided development of greening winter wheat, although freezing temperatures lingered in the more northerly growing areas. Moderate rain (25-50 mm or more) continued in the Yangtze Valley, increasing irrigation reserves for establishment of rice and other summer crops. Temperatures averaged near to below normal in southern China, but frost was patchy and light, likely having little if any impact on emerging crops. Farther north, temperatures continued to average above normal in Manchuria, but cold weather (lows of -15 degrees C or lower in the coldest locations) precluded early fieldwork in northern areas. In Manchuria, spring wheat planting is usually underway by April, followed by corn and soybean plantings. Scattered showers (5-25 mm or more) swept across South Korea and Japan.



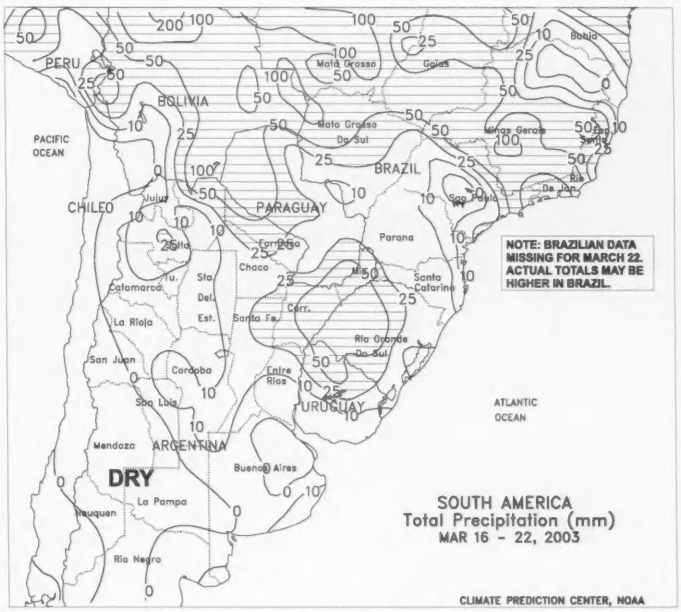
SOUTHEAST ASIA

Showers began their seasonal migration northward, resulting in lighter rainfall in Java, Indonesia, where main-season rice continued to mature. Mostly dry weather throughout the Philippines favored harvest activities of second-season rice. Dry weather in Vietnam favored maturing winter-spring rice in the south and promoted early rice maturation in the north. In Thailand, scattered showers (10-25 mm) boosted irrigation supplies for reproductive second-season rice. Showers (50-100 mm) increased moisture supplies for oil palm in peninsular Malaysia and Sumatra.



AUSTRALIA

Scattered showers (2-22 mm) in southern Queensland and northern New South Wales brought some drought relief to major summer crop areas, but the showers were too late to improve yield prospects for dryland sorghum and cotton ravaged by heat and dryness throughout much of the growing season. Although repeated, soaking rains would be welcomed in these regions to end the severe drought, summer crops were maturing in many areas and thus would benefit from continued dryness until harvesting is finished. Elsewhere in Australia, mostly dry weather (generally less than 5 mm) dominated major winter grain-producing areas. Although winter wheat and barley planting does not begin until May, significant rainfall is needed to begin recharging drought-depleted moisture reserves and to condition topsoils for planting. Temperatures were generally seasonable in major crop-producing areas, with maximum temperatures in the lower to middle 30s degrees C.



SOUTH AMERICA

In Argentina, drier weather (rainfall totaling less than 25 mm in most areas) and a continuation of above-normal temperatures (highs in the lower to middle 30s degrees C) aided summer crop harvesting in most major production areas. According to independent sources from within Argentina, corn, soybean, and sunseed were about 31, 10, and 56 percent harvested, respectively, as of March 22. In Brazil, rainfall tapered off in southern growing areas (Rio Grande do Sul to Sao Paulo and southern Mato Grosso do Sul), allowing fieldwork to progress, although scattered showers (10-50 mm or more) lingered in western sections of Rio Grande do Sul. The intermittent showers in the south benefited immature soybeans and newly planted winter corn. Warm, showery weather (temperatures averaging about 1 degree C above normal, with precipitation exceeding 25 mm) continued to the north and west (Mato Grosso, Goias, and northern Mato Grosso do Sul), but dry pockets returned to southern Bahia and northern Minas Gerais. According to independent sources from within Brazil, soybeans were about 31 percent harvested as of March 21. Harvesting in Mato Grasso and Parana, Brazil's largest production areas, was reportedly nearing the halfway point.

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